

PTO-SB-08A (10-98)
Approved for use 10-31-99. OMB 0651-0031

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Application Number	10/028,437
Filing Date	12-28-2001
First Named Inventor	James A. Cox et al.
Art Unit	2874
Examiner Name	t.b.d.
Attorney Docket Number	V637 02531 US

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Sheet	1	Of	3
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Examiner Initials*	Cite No.†	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pp. Columns, Lines where relevant passages or relevant figures appear
		Number	Kind Code* (if known)			
H-V		5,262,360	A	Holonyak, Jr., et al.	457/167	11-16-1993
		5,373,522	A	Holonyak, Jr., et al.	372/148	12-13-1994
		5,493,577	A	Choquette et al.	372/166	02-20-1996
		5,567,980	A	Holonyak, Jr., et al.	457/163	10-22-1996
		5,581,571	A	Holonyak, Jr., et al.	372/146	12-03-1996
		5,696,023	A	Holonyak, Jr., et al.	457/143	12-09-1997
		5,896,408	A	Corzine et al.	372/141	04-20-1999
		5,903,588	A	Guenter et al.	372/146	05-11-1999
		5,903,589	A	Jewell	372/146	05-11-1999
		5,978,408	A	Thornton	372/196	11-02-1999
		6,014,395	A	Jewell	372/145	01-11-2000
		6,208,681	B1	Thornton	372/146	03-27-2001
		6,269,109	B1	Jewell	372/143	07-31-2001
		6,297,068	B1	Thornton	438/16	10-02-2001
H-V		6,372,533	B2	Jayaraman et al.	438/22	04-16-2002

[illegible]

Date Considered

5/19/02

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Sheet	2	Of	2
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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

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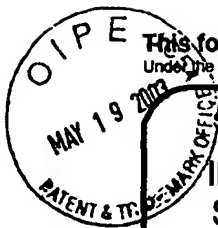
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Approved for use 04-30-2003. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet	1	Of	2
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U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code* (if known)			
		US				
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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³	Number ⁴	Kind Code ⁵ (if known)				
H ✓		DE	201 13 207	U1	12-20-2001	Ying-Jay Yang		
H ✓		EP	0 772 266	A1	05-07-1997	Motorola, Inc.		

Examiner Signature		Date Considered	5/19/06
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Sheet 2 of 3

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Application Number 10/028,437
Filing Date 12-28-2001
First Named Inventor James A. Cox et al.
Art Unit 2874
Examiner Name t.b.d.
Attorney Docket Number V637 02531 US

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.†	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T²
H✓		Bowers, J., et al., "Fused vertical cavity lasers with oxide aperture", final report 1996-97 for MICRO project 96-042.	
H✓		Choe, J.S., et al., "Lateral oxidation of AlAs layers at elevated water vapour pressure using a closed-chamber system", letter to the editor, Semicond. Sci. Technol., 15 (2000), pgs. L35-L38.	no month
		Chua, C.L., et al., "Low-threshold 1.57-μm VCSEL's using strain-compensated quantum wells and oxide/metal backmirror", article, IEEE Photonics Technology Letters, Vol. 7, No. 5, pgs. 444-448, May 1995.	no month
		Chua, C.L., et al., "Planar laterally oxidized vertical-cavity lasers for low-threshold high-density top-surface-emitting arrays", article, IEEE Photonics Technology Letters, Vol. 9, No. 8, pgs. 1060-1062, August 1997.	
		Farrier, R.C. "Parametric control for wafer fabrication: new CIM techniques for data analysis," Solid State Technology, September 1997	
		Fushimi, H., and Wada, K, "Degradation Mechanism in Carbon-doped GaAs Minority-carrier Injection Devices," 1996 IEEE International Reliability Physics Proceedings; (1996), pp. 214-220.	no month
	*	Greib, K.M., et al., "Comparison of fabrication approaches for selectively oxidized VCSEL arrays", article, Vertical-Cavity Surface-Emitting Lasers IV, Proceedings of SPIE, Vol. 3946, pgs. 36-40, 2000.	no month
		Guenter, J., et al., "Commercialization of Honeywell's VCSEL Technology: Further Developments," in Vertical-Cavity Surface-Emitting Lasers V, Choquette, K.D. and Lei, C., editors, Proceedings of the SPIE Vol. 4286, (2001), pp. 1-14.	no month
		Guenter, J., et al., "Reliability of proton-implanted VCSELs for data communications," in Fabrication, Testing, and Reliability of Semiconductor Lasers, Fallahi, M. and Wang, S. editors, Proceedings of the SPIE, vol. 2683, (1996), pp. 102-113.	no month
		Hawthorne, R.A. et al., "Reliability Study of 850 nm VCSELs for Data Communications," 1996 IEEE International Reliability Physics Proceedings, 34, (1996), pp. 203-210.	no month
		Herrick, R.W., et al., "Highly reliable oxide VCSELs manufactured at HP/Agilent Technologies," in Vertical-Cavity Surface-Emitting Lasers IV, Choquette, K.D. and Lei, C., editors, Proceedings of the SPIE Vol. 3946, (2000), pp. 14-19.	
	*	Kash, J.A., et al., "Recombination in GaAs at the AlAs oxide-GaAs interface," Appl. Phys. Lett. 67 (14), 2 October 1995; pp 2022-2024.	no month
		Koley, B., et al., "Dependence of lateral oxidation rate on thickness of AlAs layer of interest as a current aperture in vertical-cavity surface-emitting laser structures", article, Journal of Applied Physics, Vol. 84, No. 1, pgs. 600-605, July 1, 1998.	
		Maeda, K., and Takeuchi, S., "Enhanced Glide of Dislocations in GaAs Single Crystals by Electron Beam Irradiation," Japanese Journal of Applied Physics, vol. 20, no. 3 (1981), pp. L165-L168.	no month
		Osinski, M., et al., "Temperature and thickness dependence of steam oxidation of AlAs in cylindrical mesa structures", article, IEEE Photonics Technology Letters, Vol. 13, No. 7, pgs. 687-689, July 2001.	
		Peck, D. Stewart, "Comprehensive Model for Humidity Testing Correlation," 1986 IEEE International Reliability Physics Proceedings; (1986), pp. 44-50.	no month
		Ries, M.J., et al., "Visible-Spectrum (λ= 650 nm) photopumped (pulsed, 300 K) laser operation of a vertical-cavity AlAs-AlGaAs/InAlP-InGaP quantum well heterostructure utilizing native oxide mirrors", article, Appl. Phys. Lett. 67, pgs. 1107-1109, August 1995	
		Sah, C-T, et al., "Carrier Generation and Recombination in P-N Junctions and P-N Junction Characteristics," Proceedings of the IRE, September 1957, pp 1228-1243.	
H✓		Shi, S., et al., "Photoluminescence study of hydrogenated aluminum oxide-semiconductor interface," Appl. Phys. Lett. 70 (10), 10 March 1997; pp 1293-1295.	

Examiner Signature

[Signature]

Date Considered

5/11/04

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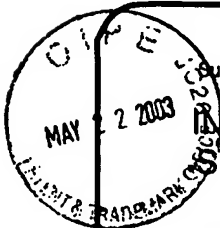
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Art Unit	2874
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Examiner Name	t.b.d.
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Attorney Docket Number | V637 02531 US

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<p>Substitute for form 1449B-PTO</p> <p style="text-align: center; font-size: 1.2em; font-weight: bold;">INFORMATION DISCLOSURE STATEMENT BY APPLICANT</p> <p style="text-align: center; font-size: 0.8em;">(USE AS MANY SHEETS AS NECESSARY)</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="width: 25%; text-align: center;">Sheet</td> <td style="width: 25%; text-align: center;">2</td> <td style="width: 25%; text-align: center;">Of</td> <td style="width: 25%; text-align: center;">2</td> </tr> </table>	Sheet	2	Of	2	<p style="text-align: center; font-weight: bold;">COMPLETE IF KNOWN</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Application Number</td> <td style="width: 50%;">New</td> </tr> <tr> <td>Filing Date</td> <td>December 28, 2001</td> </tr> <tr> <td>First Named Inventor</td> <td>James A. COX et al.</td> </tr> <tr> <td>Group Art Unit</td> <td>T.B.A.</td> </tr> <tr> <td>Examiner Name</td> <td>T.B.A.</td> </tr> <tr> <td>Attorney Docket Number</td> <td>V637- 02531US</td> </tr> </table>	Application Number	New	Filing Date	December 28, 2001	First Named Inventor	James A. COX et al.	Group Art Unit	T.B.A.	Examiner Name	T.B.A.	Attorney Docket Number	V637- 02531US
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